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National Weather Service

Hydrologic Outlook
March 2004



Overview

- Water Supply forecasts for March 1st are expected to produce normal to below normal flows this spring. The amounts are based on basically two physical parameters at this time: snowpack and soil moisture. Snowpack volumes range from above normal amounts in the south, and normal to below in the northern half of the state. The Virgin, Escalante, and Tooele river basins, including the Wasatch front, and the eastern Uinta mountain ranges currently have the largest snowpacks compared to average in the state. Total snow accumulation statewide to this date has been a major improvement over past years. However, soil moisture levels are lower than normal due to the dry fall months of 2003. Expected loss to soil moisture infiltration can be expected to be approximately 10 percent higher than normal loss.
- Other aspects of the spring runoff that are yet to be known include the amount of snow collected during the remainder of March, and the spring climate. Depending on temperature levels and precipitation amounts this spring, spring runoff numbers can vary 25% in either direction depending on the climate.
- If the spring climate produces a cool wet spring through May and then warms significantly, we can expect a much more efficient runoff and a higher yield. If the climate is somewhat warm and somewhat cool, with a lack of precipitation, then expect these numbers to decline. The spring climate scenario will become clearer as we move closer to April 1st.



Hydrologic Outlook

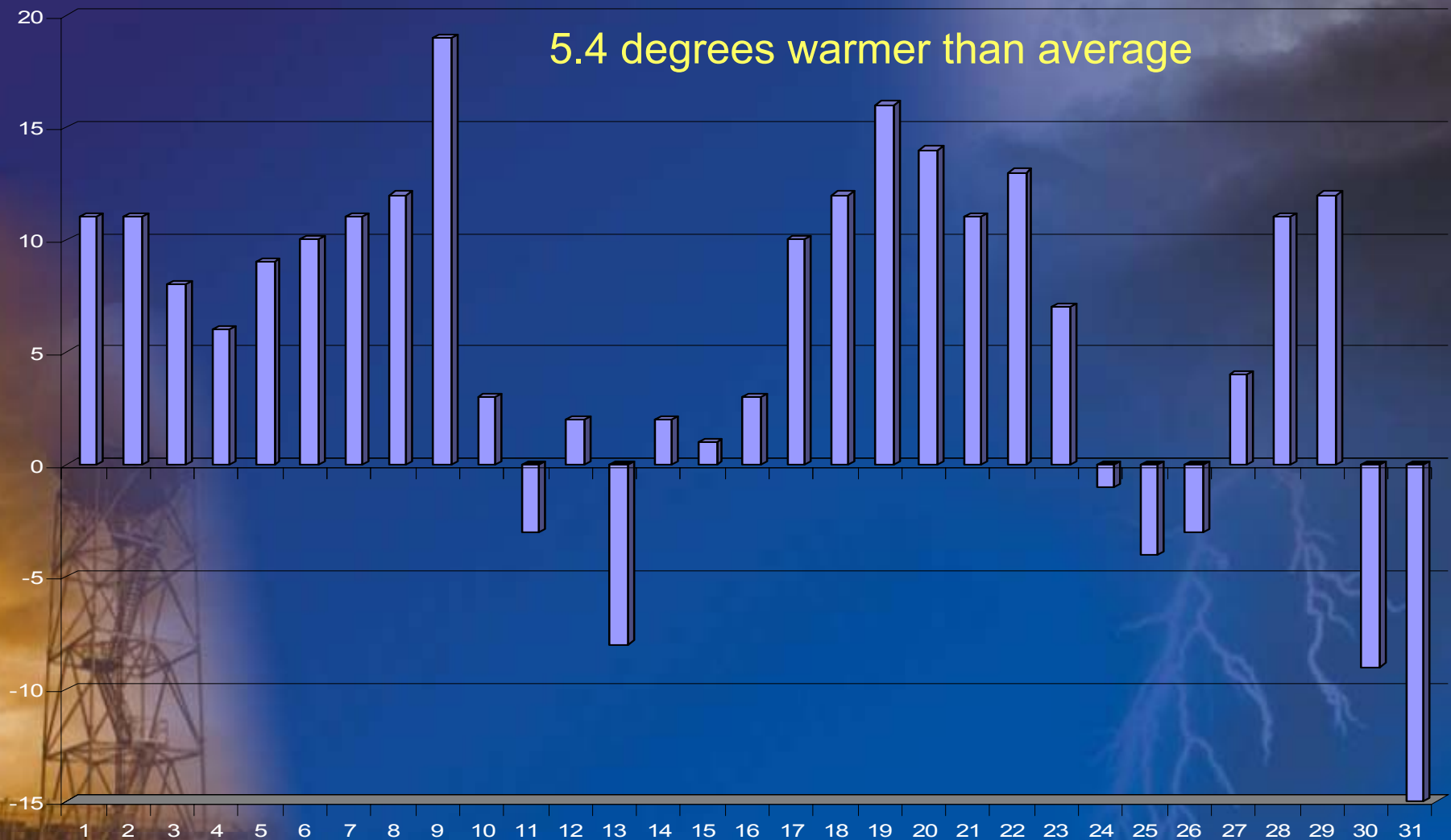
- Temperature



October

Salt Lake City Temperature Departure from Normal

5.4 degrees warmer than average

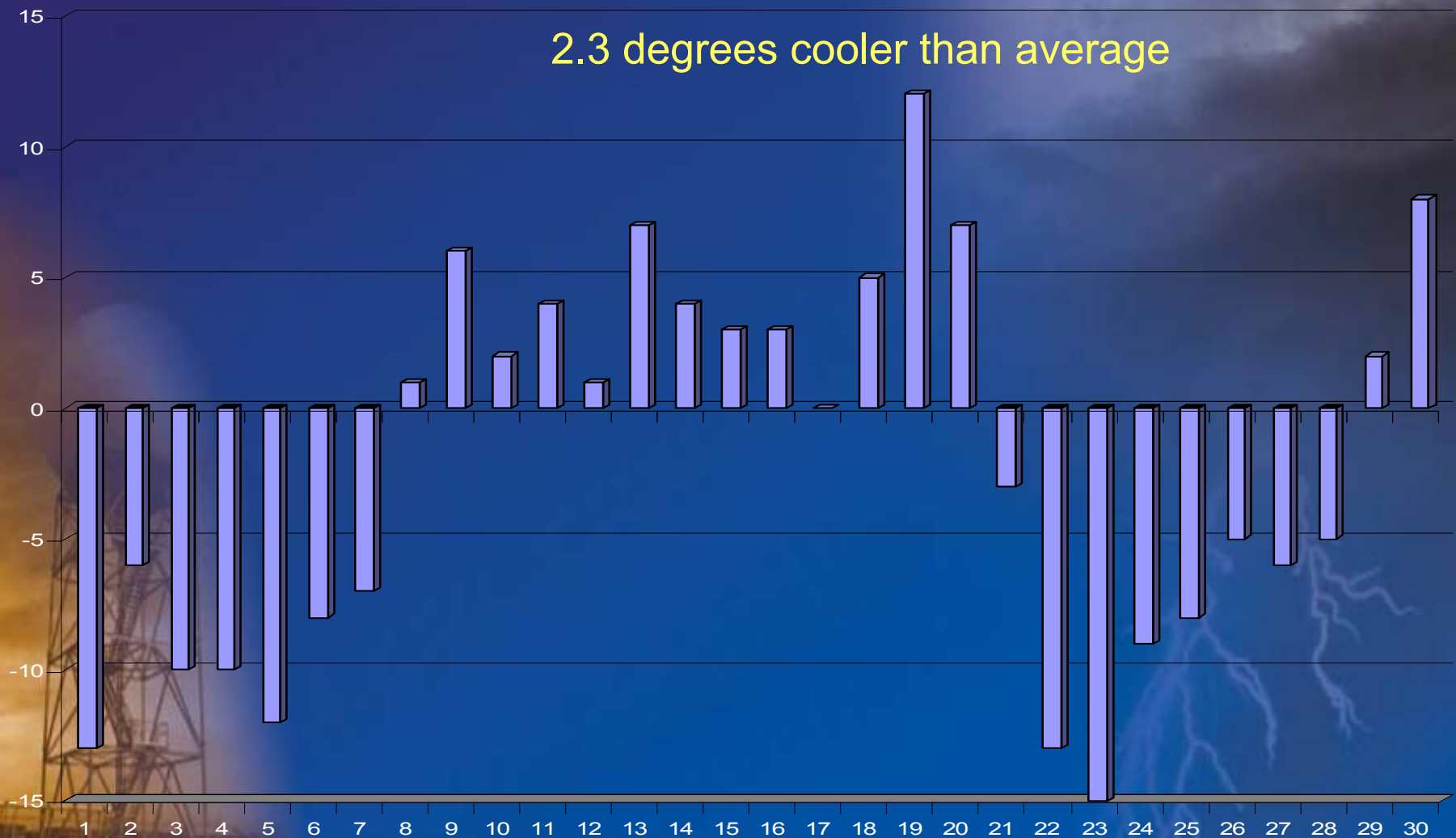




November

Salt Lake City Temperature Departure from Normal

2.3 degrees cooler than average

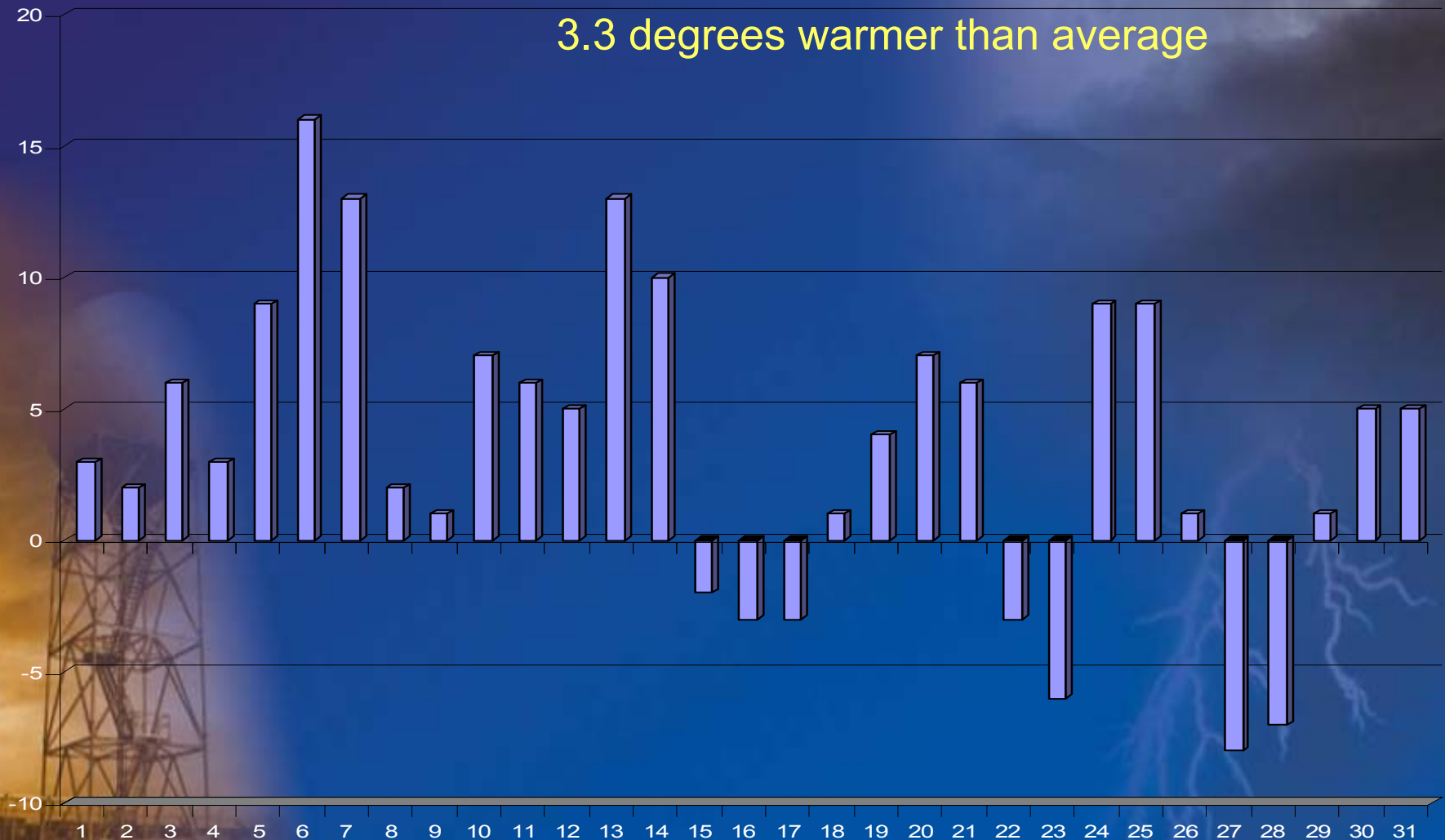




December

Salt Lake City Temperature Departure from Normal

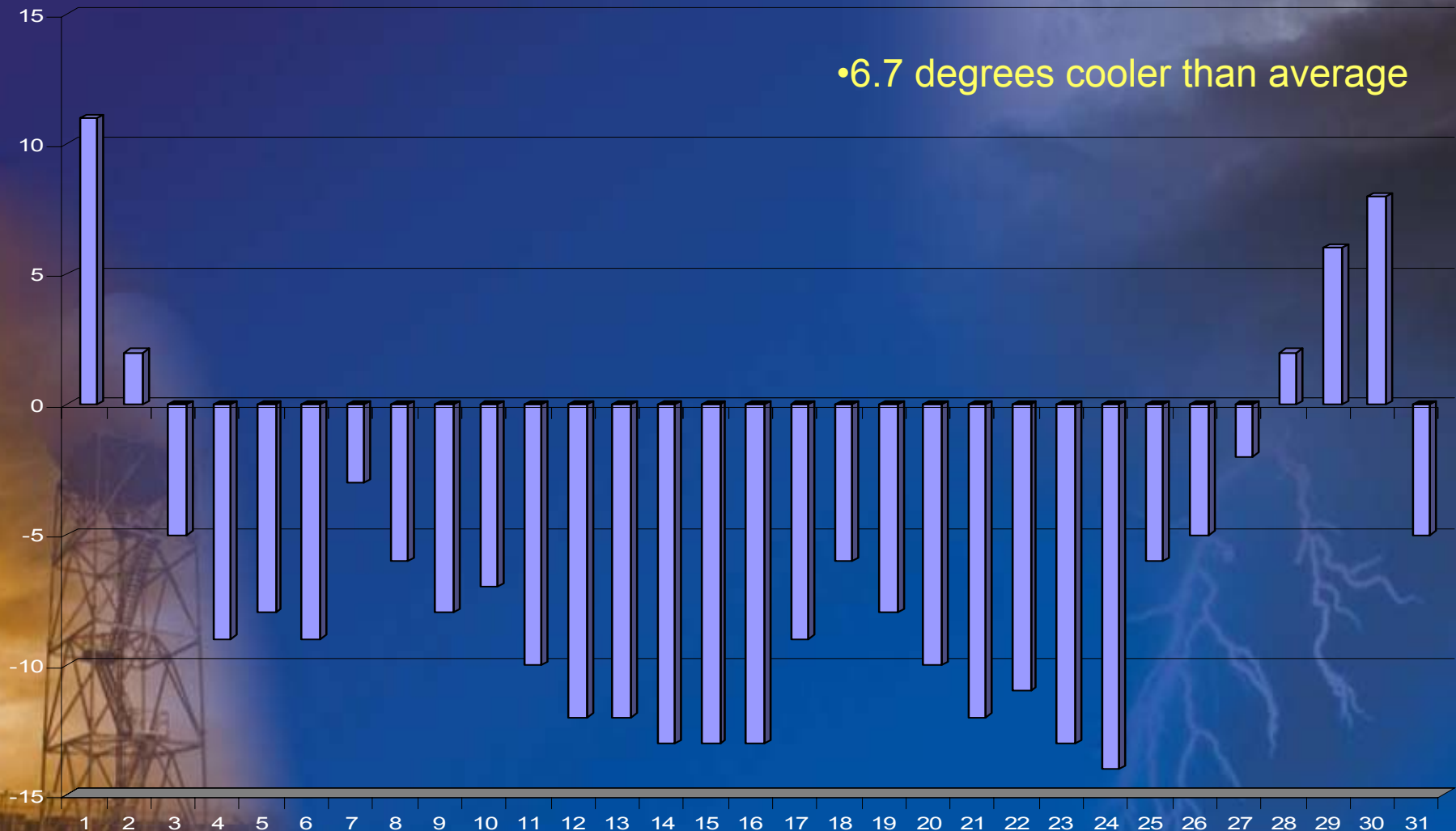
3.3 degrees warmer than average





January

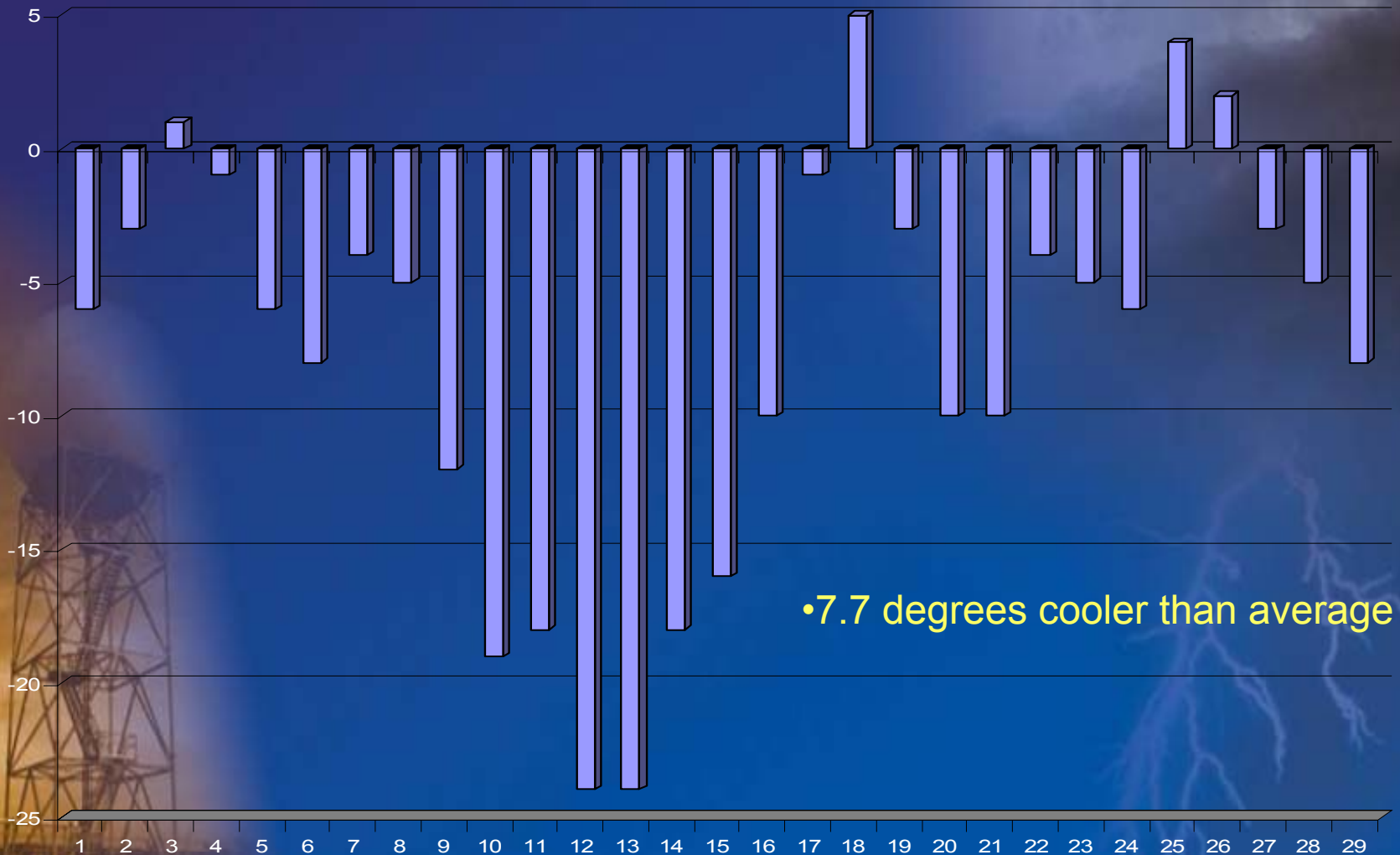
Salt Lake City Temperature Departure from Normal





February

Salt Lake City Temperature Departure from Normal





Hydrologic Outlook

- Precipitation

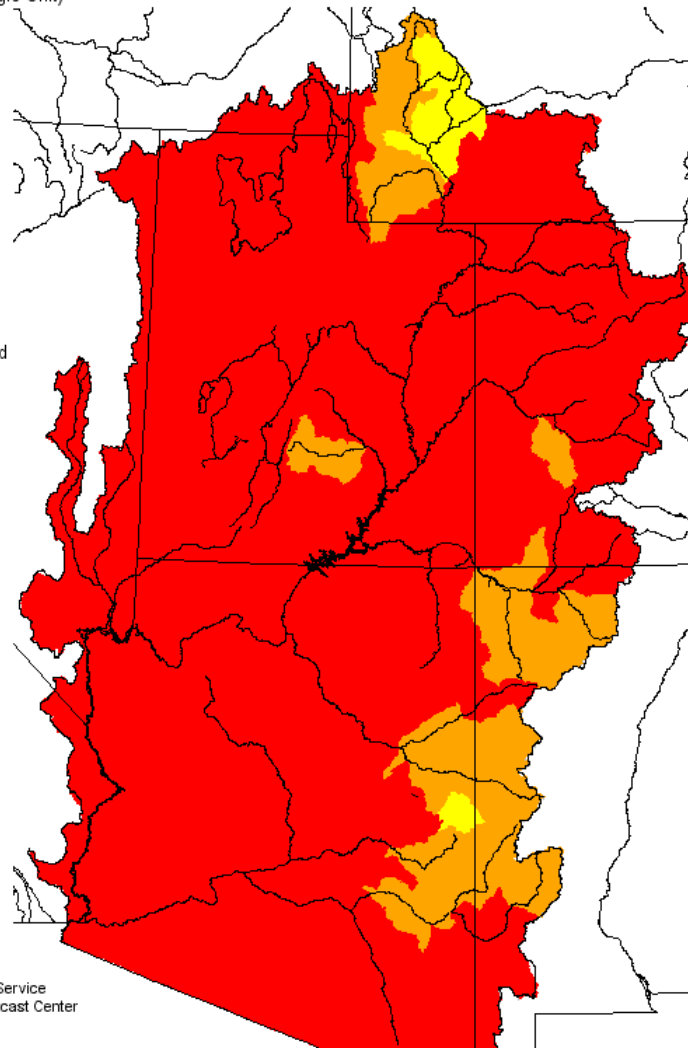
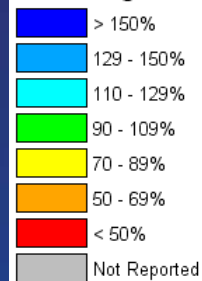


Precipitation

Monthly Precipitation for October 2003

(Averaged by Hydrologic Unit)

% Average



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

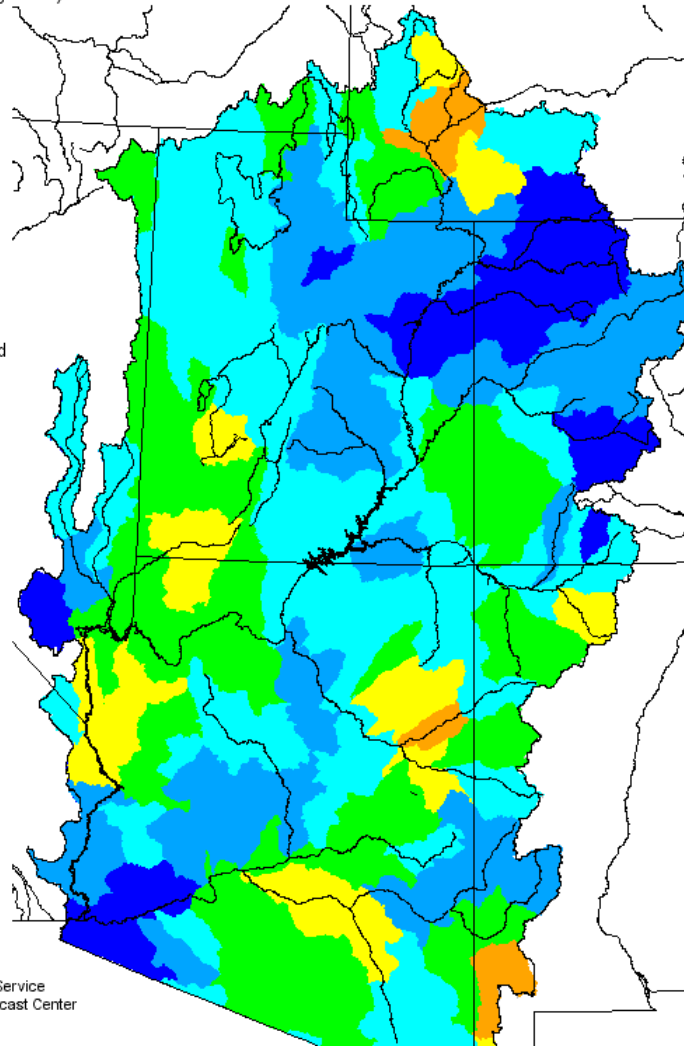
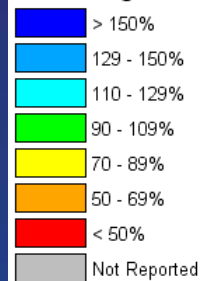


Precipitation

Monthly Precipitation for November 2003

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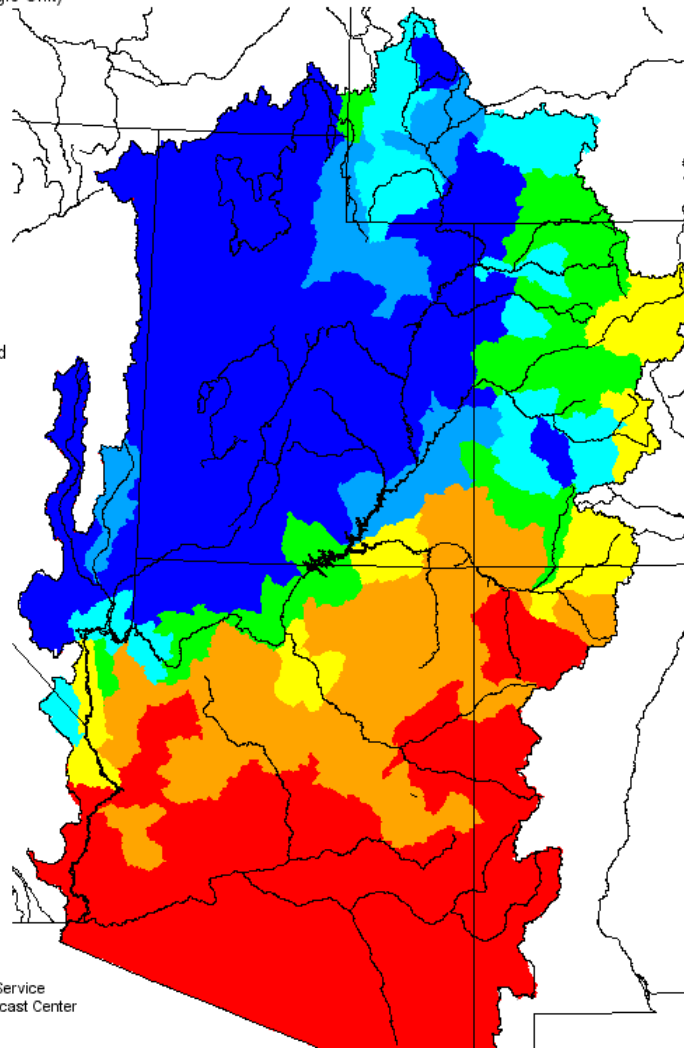
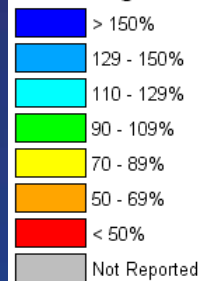


Precipitation

Monthly Precipitation for December 2003

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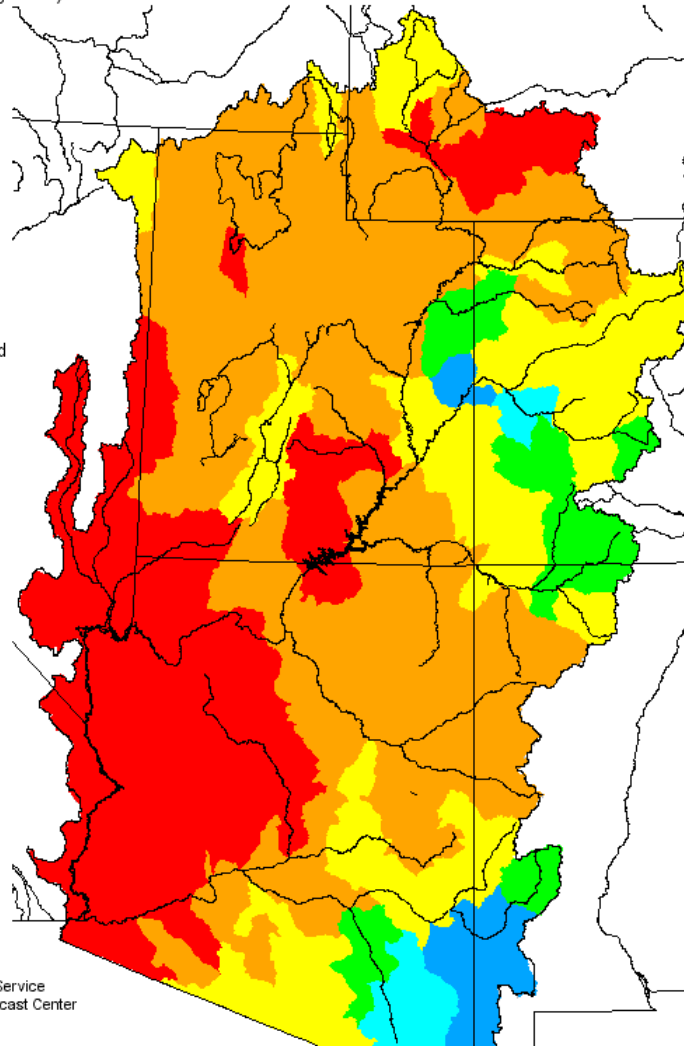
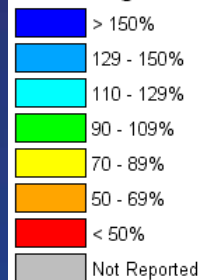


Precipitation

Monthly Precipitation for January 2004

(Averaged by Hydrologic Unit)

% Average



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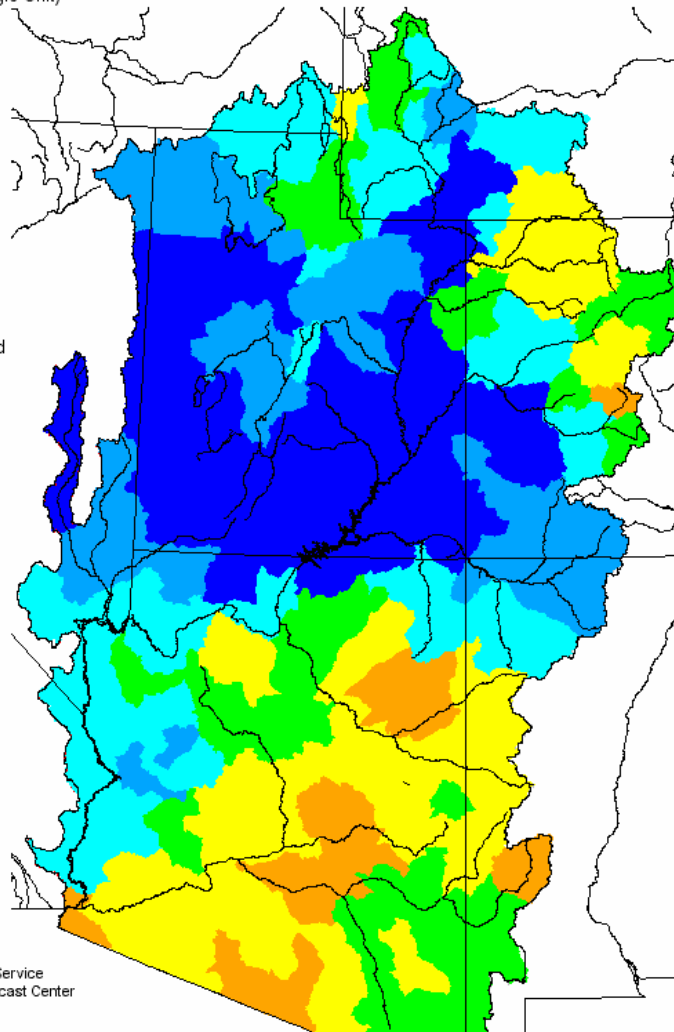
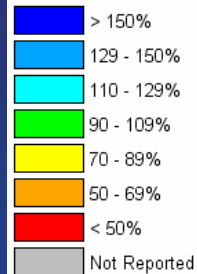


Precipitation

Monthly Precipitation for February 2004

(Averaged by Hydrologic Unit)

% Average



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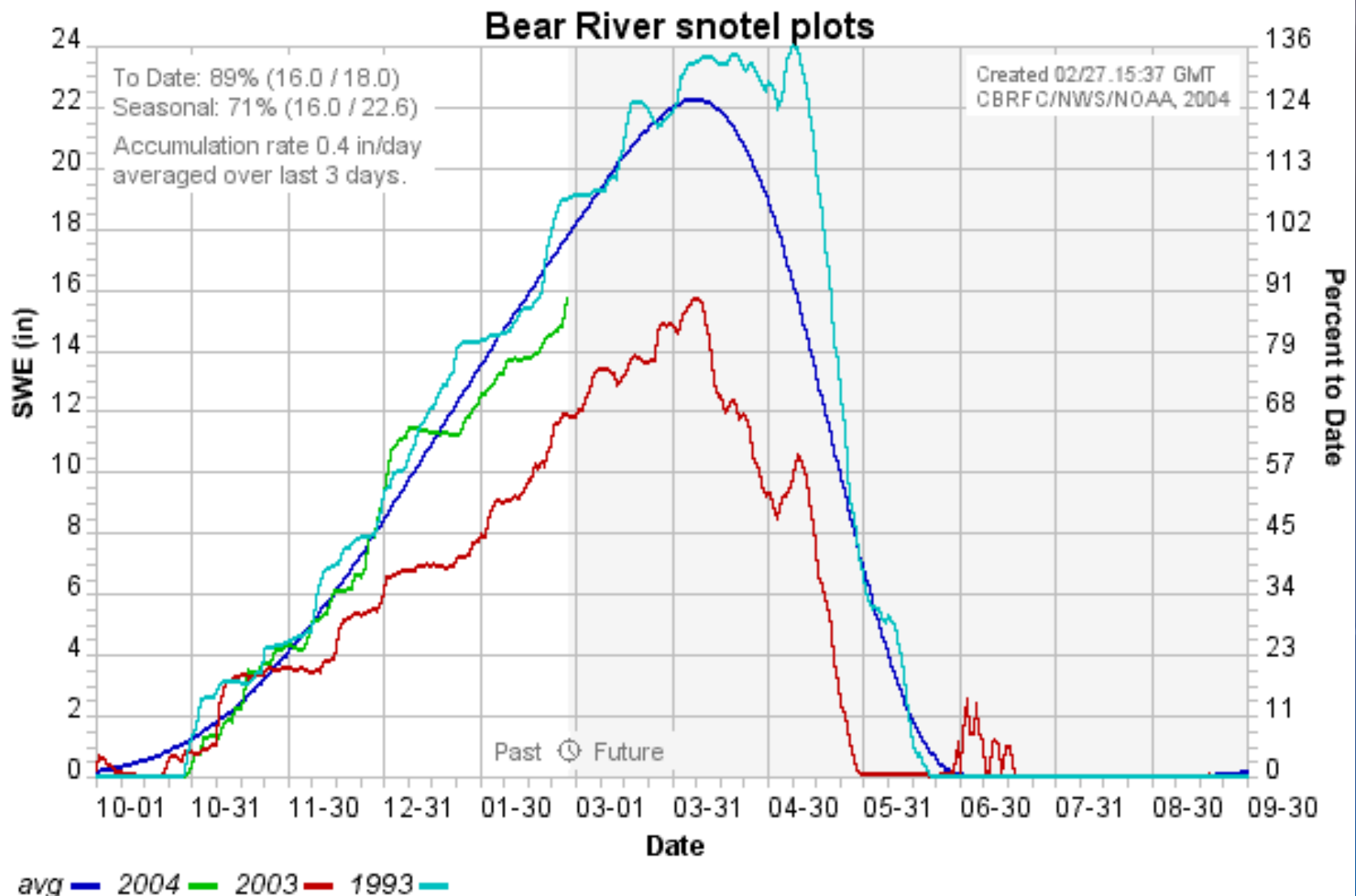
Hydrologic Outlook

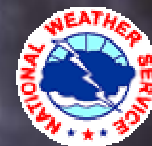
- Snowpack



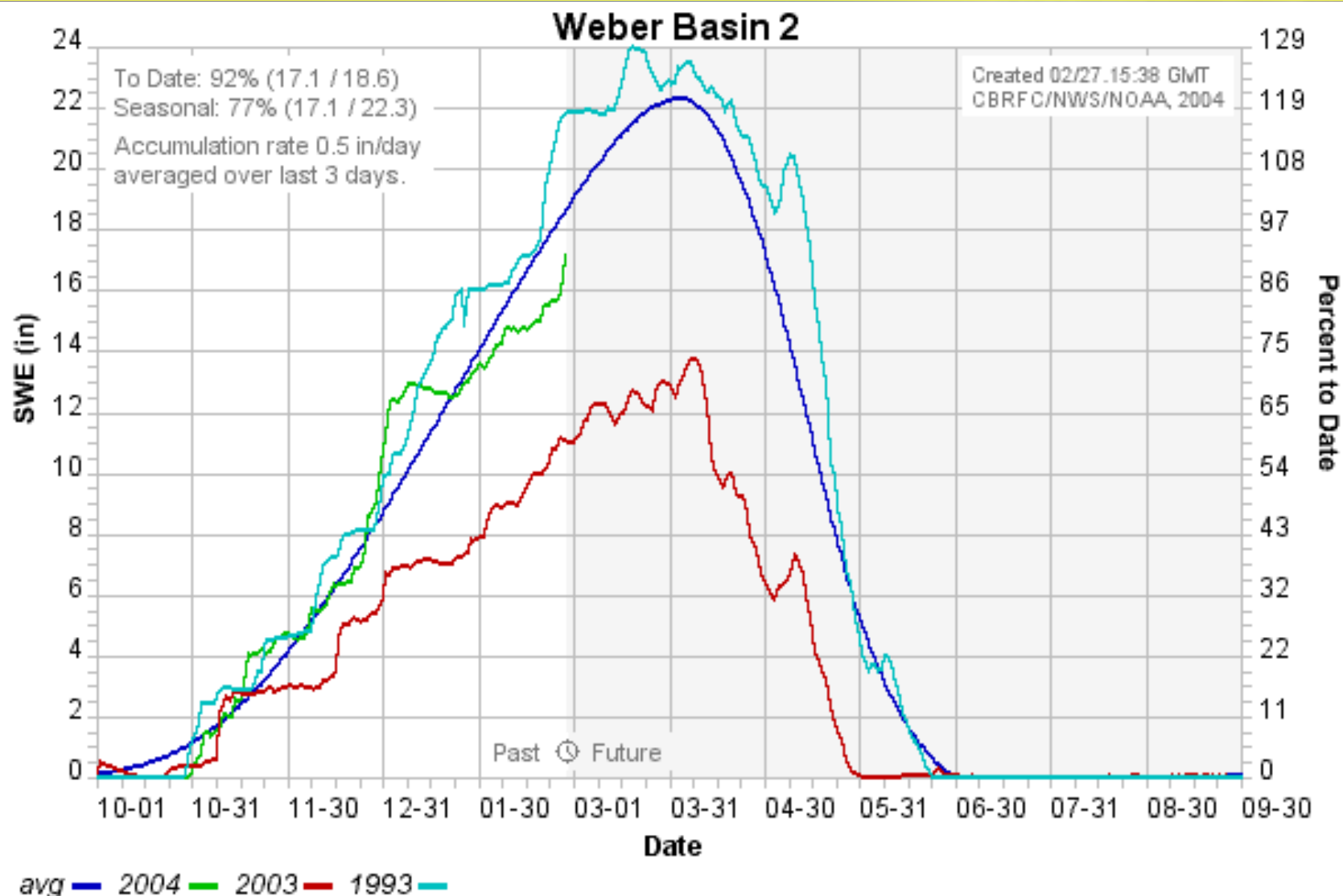
Hydrologic Outlook

Bear River Basin Snow





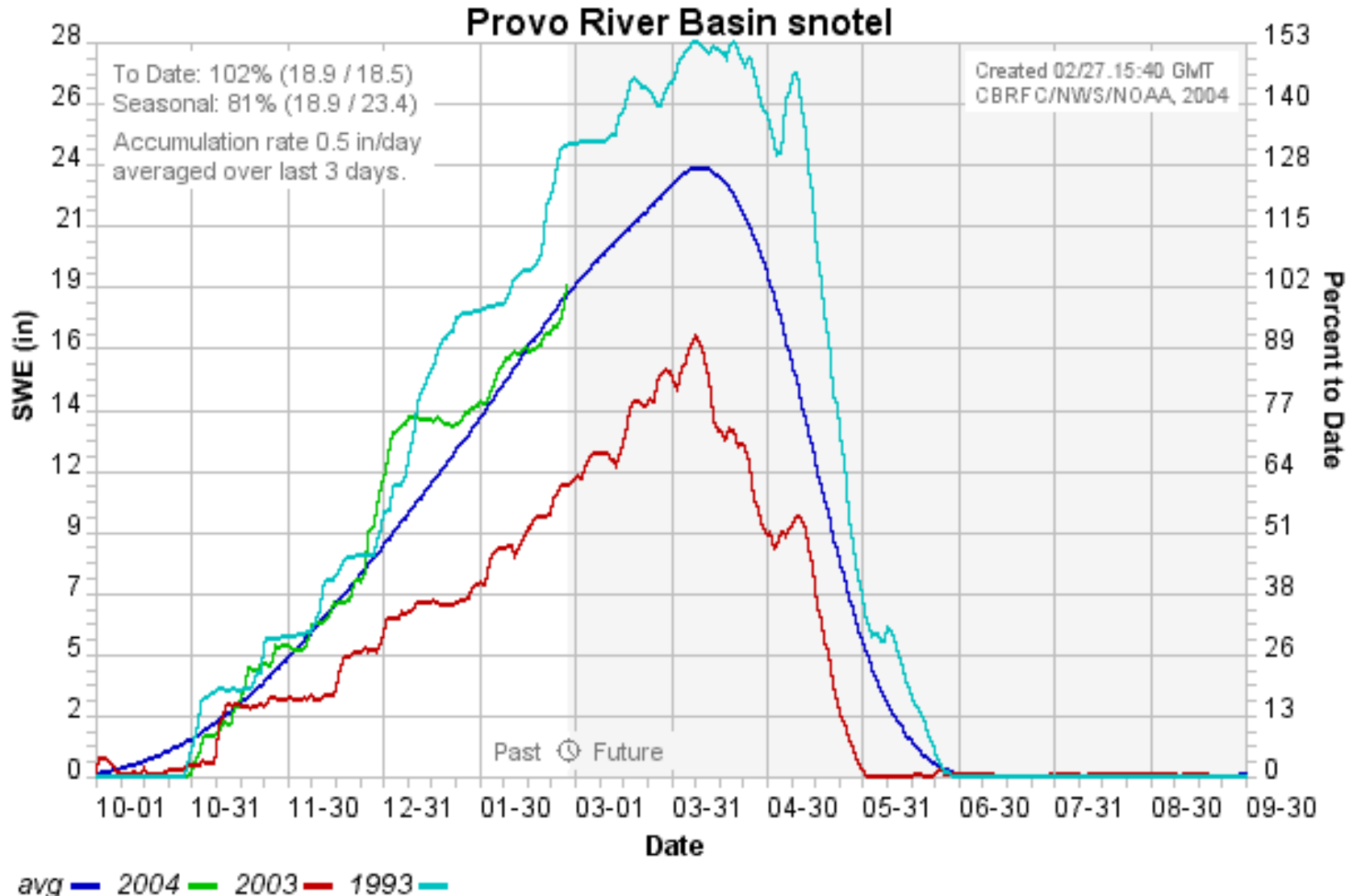
Hydrologic Outlook Weber River Basin Snow





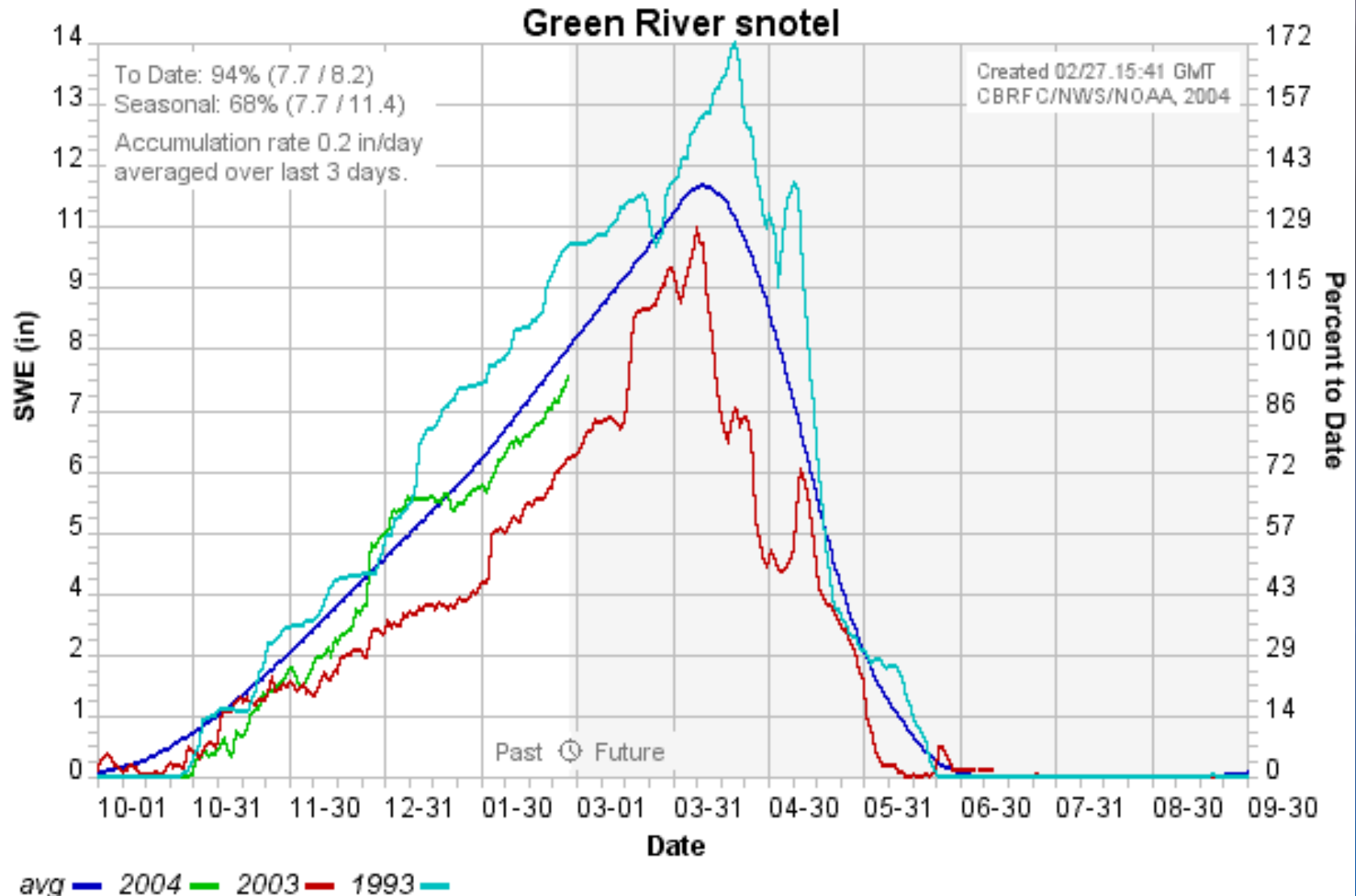
Hydrologic Outlook

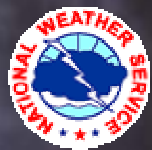
Provo River Basin Snow





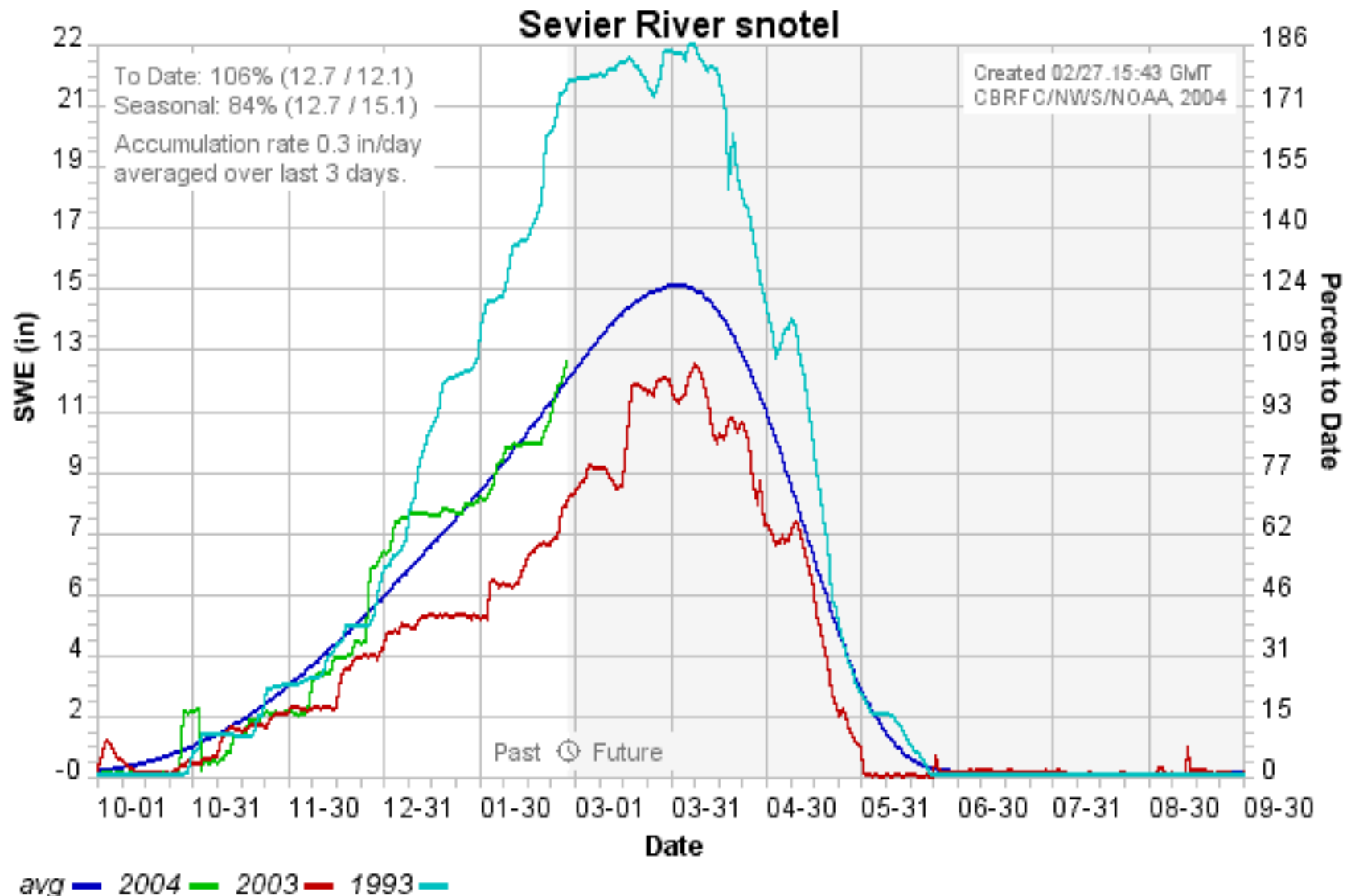
Hydrologic Outlook Green River Basin Snow





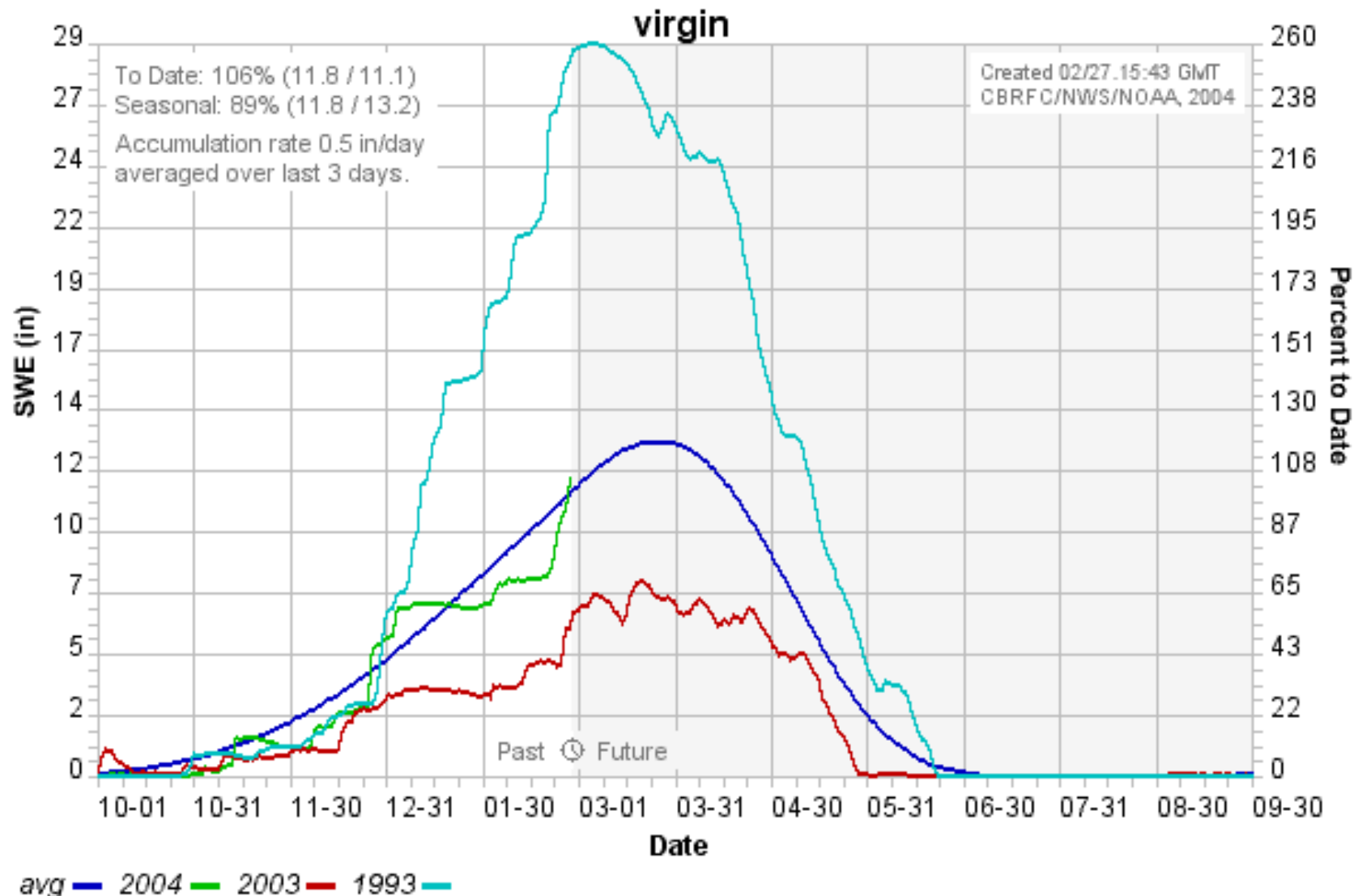
Hydrologic Outlook

Sevier River Basin Snow





Hydrologic Outlook Virgin River Basin Snow





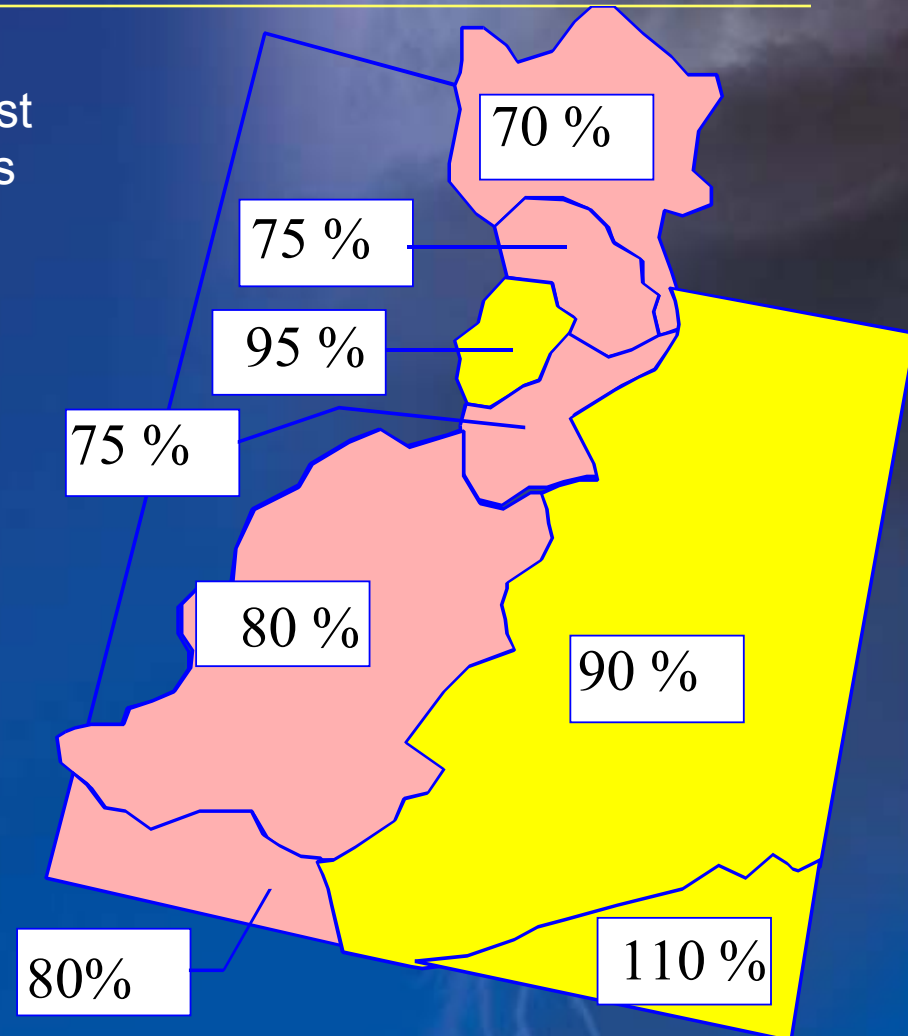
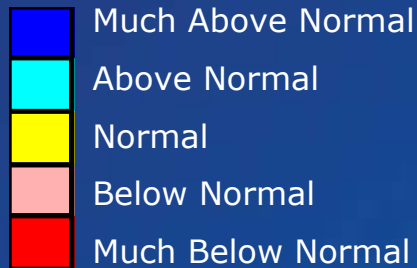
Hydrologic Outlook

- Water Supply Forecast



Forecasted Utah Spring Snowmelt Runoff Volumes

March 1st 2004
April Through July Volume Forecast
Percent of 30 Year Average Flows
Utah Area River Basins





Forecasted Utah Spring Snowmelt Runoff Volume

March 1st 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows



Bear River Basin





Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows



Weber River Basin

Pineview Res.

80%

Gateway

76%

Ogden River

Lost Creek Res.

75%

East Canyon Res.

90%

Weber River

Rockport Res.

63%

Chalk Creek

62%

Oakley

69%





Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows

Six Creeks River Basin

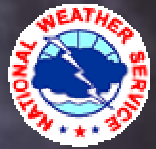




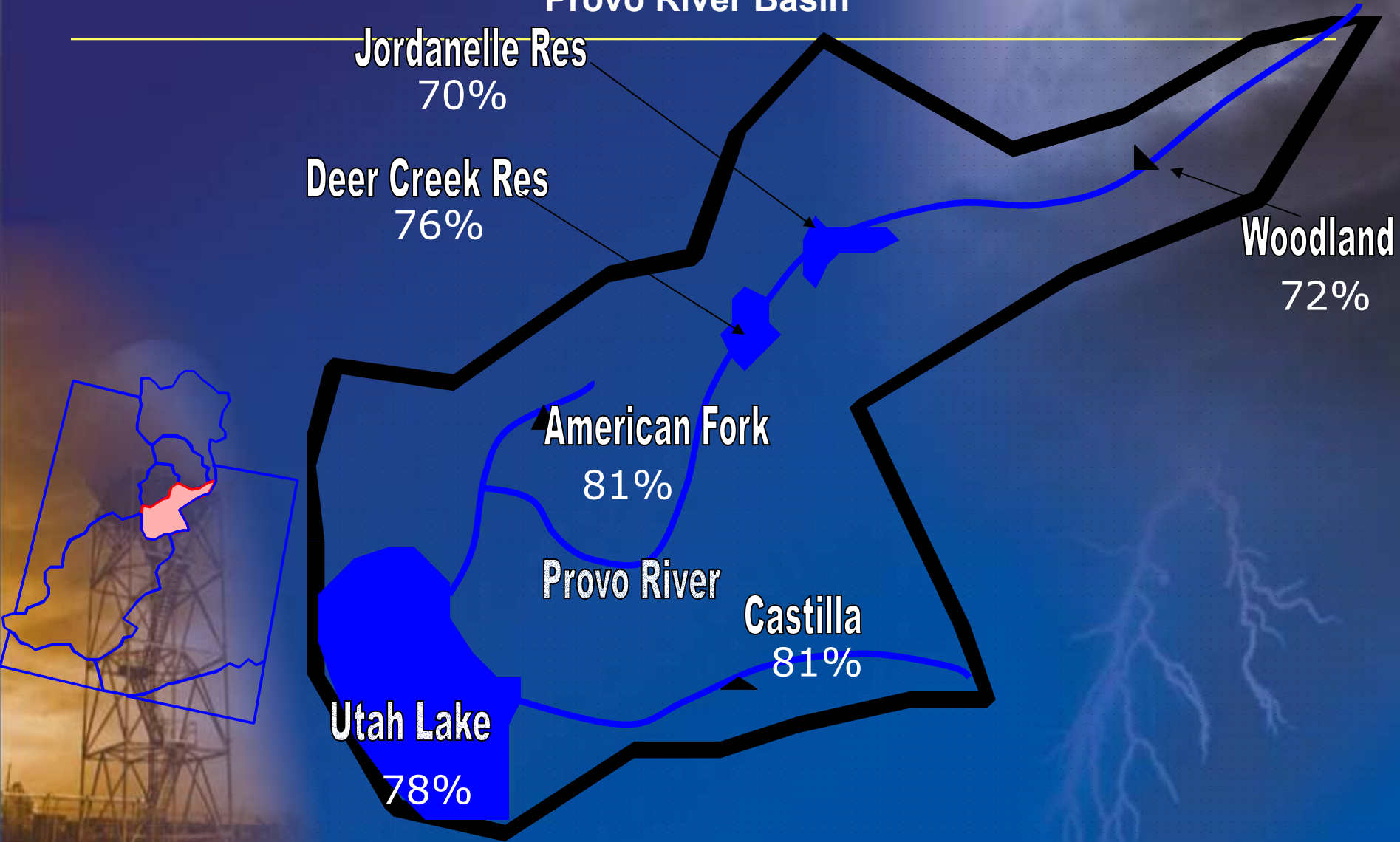
Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows



Provo River Basin





Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows



Green River Basin

Strawberry Res.

93%

Starvation Res.

86%

Scofield Res.

91%

Upper Stillwater

94%

Tabiona

88%

Red Fleet Res.

110%

Duchesne

89%

Price River

Green River

80%

Lake Powell Res.

82%

Flaming Gorge Res.

69%

Moon Lake

93%

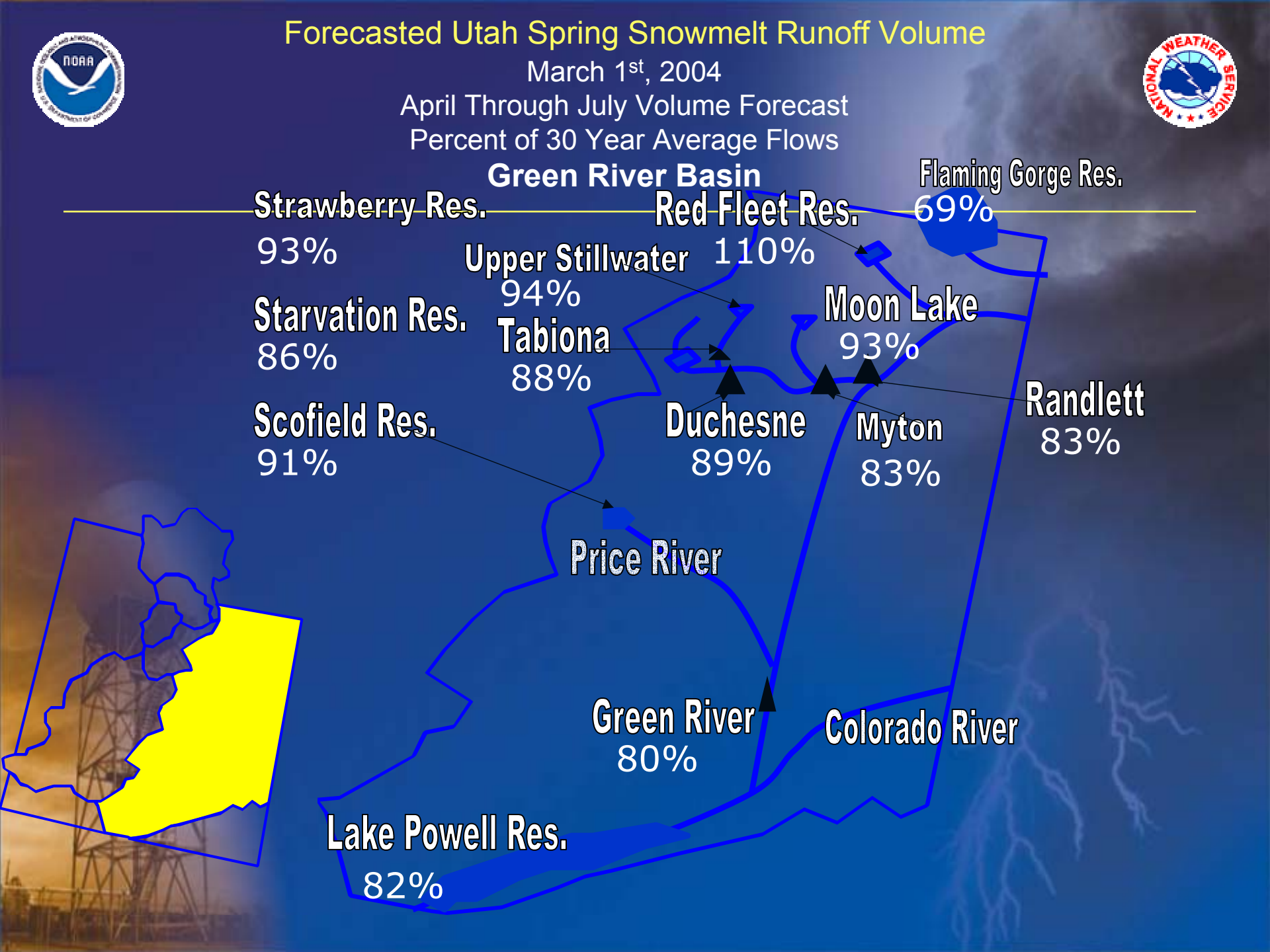
Myton

83%

Randlett

83%

Colorado River



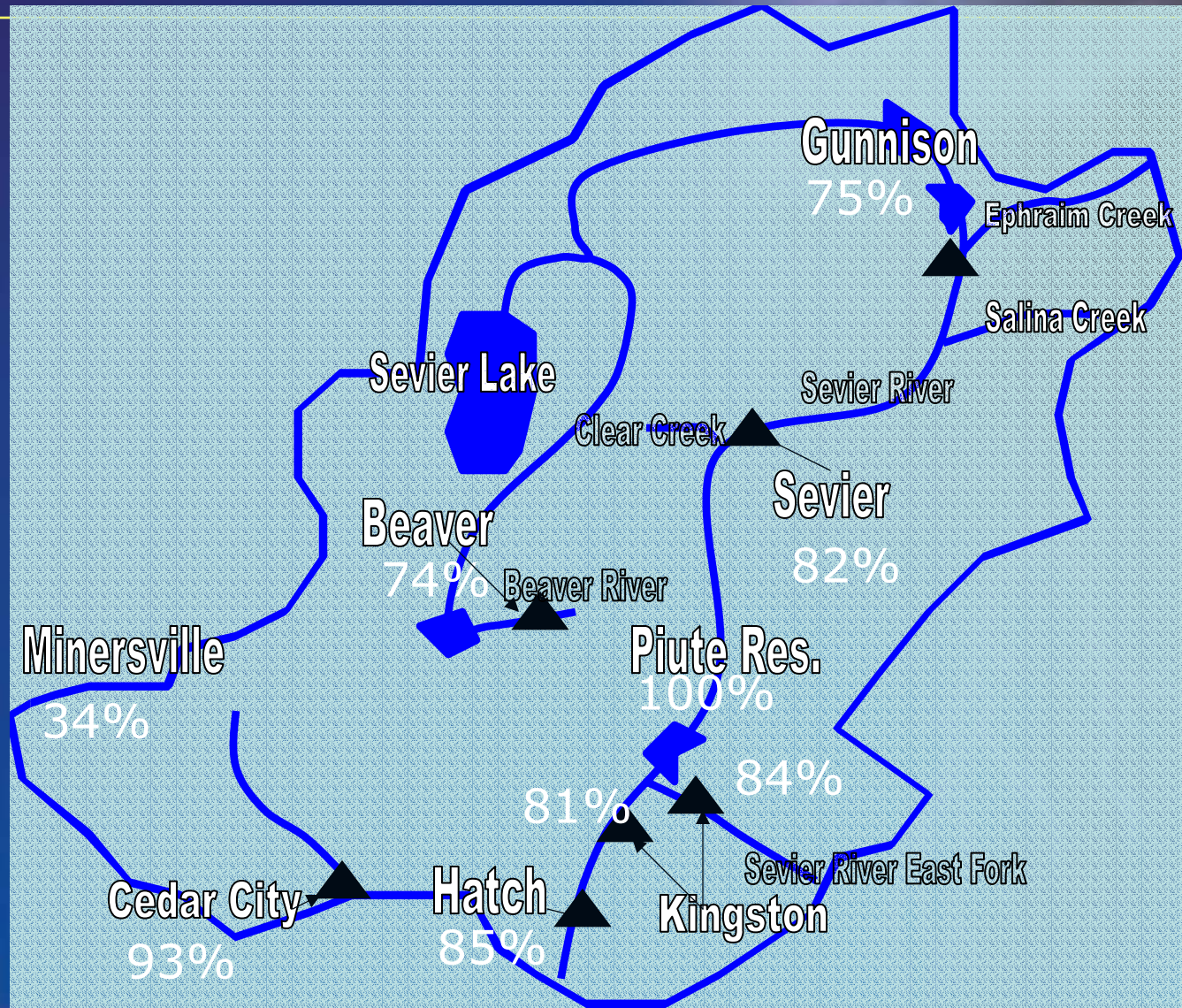


Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast
Percent of 30 Year Average Flows

Sevier River Basin





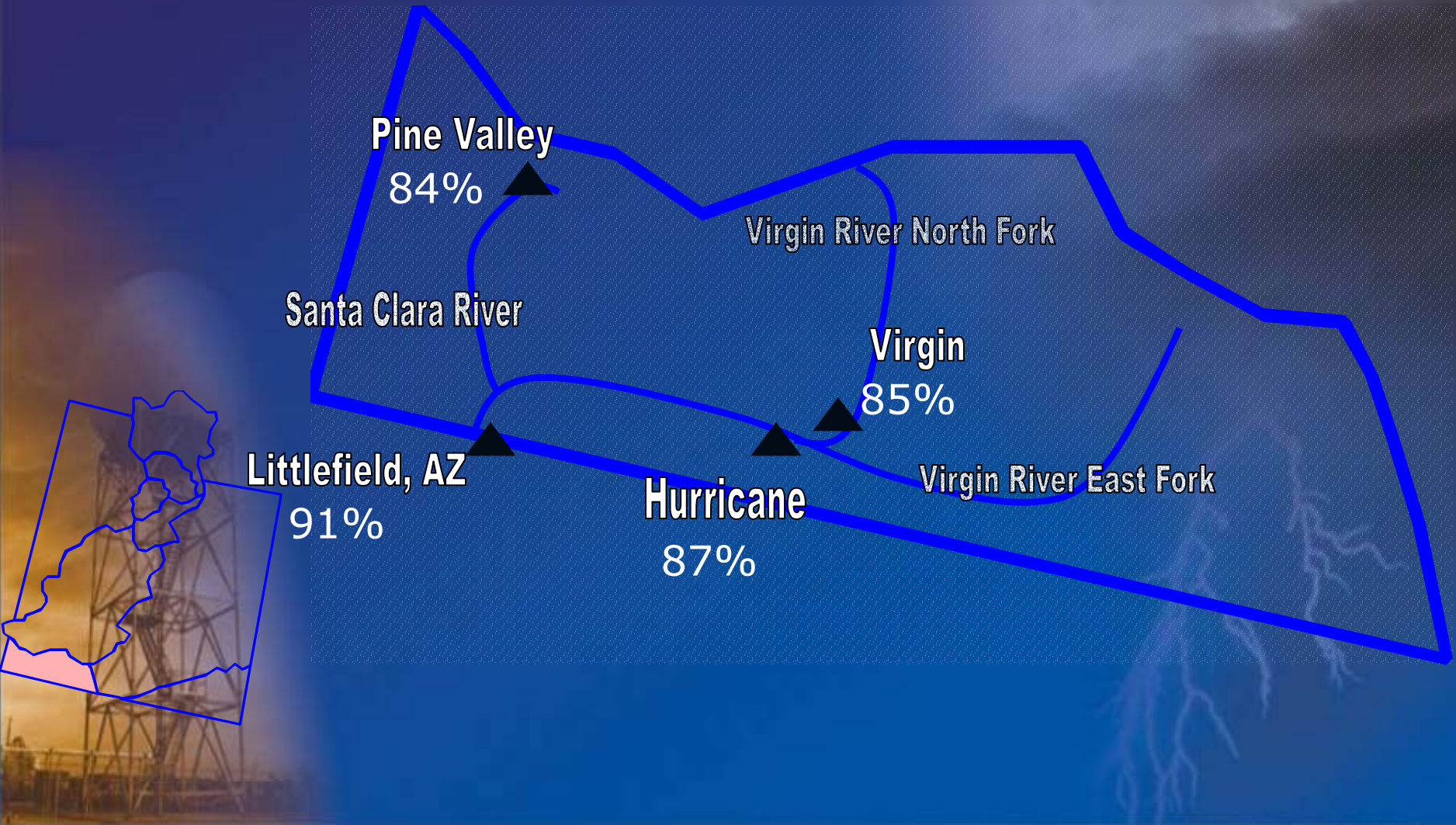
Forecasted Utah Spring Snowmelt Runoff Volume

March 1st, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows

Virgin River Basin





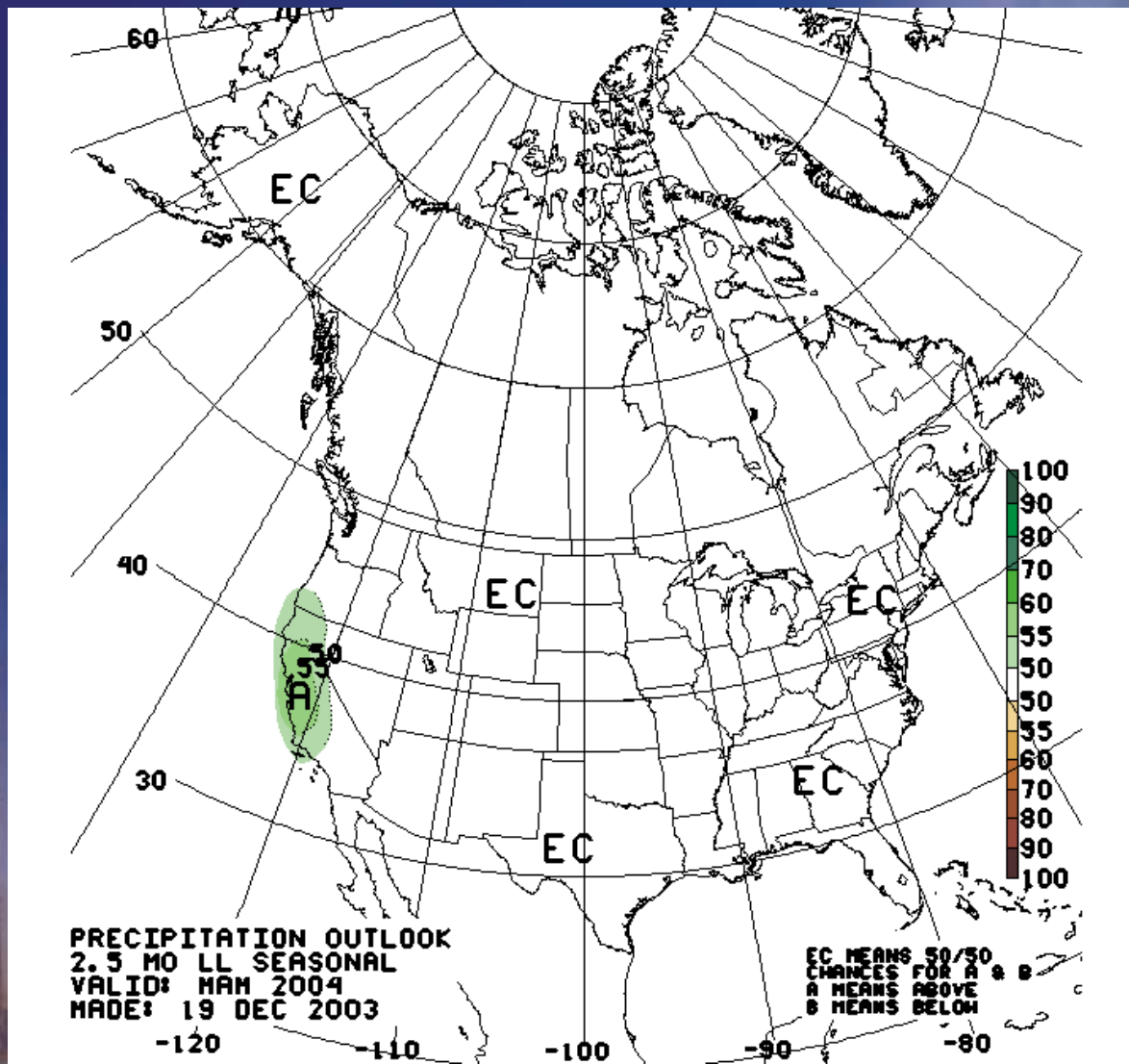
Hydrologic Outlook

- Long Range Forecast



Long Range Precipitation Forecast

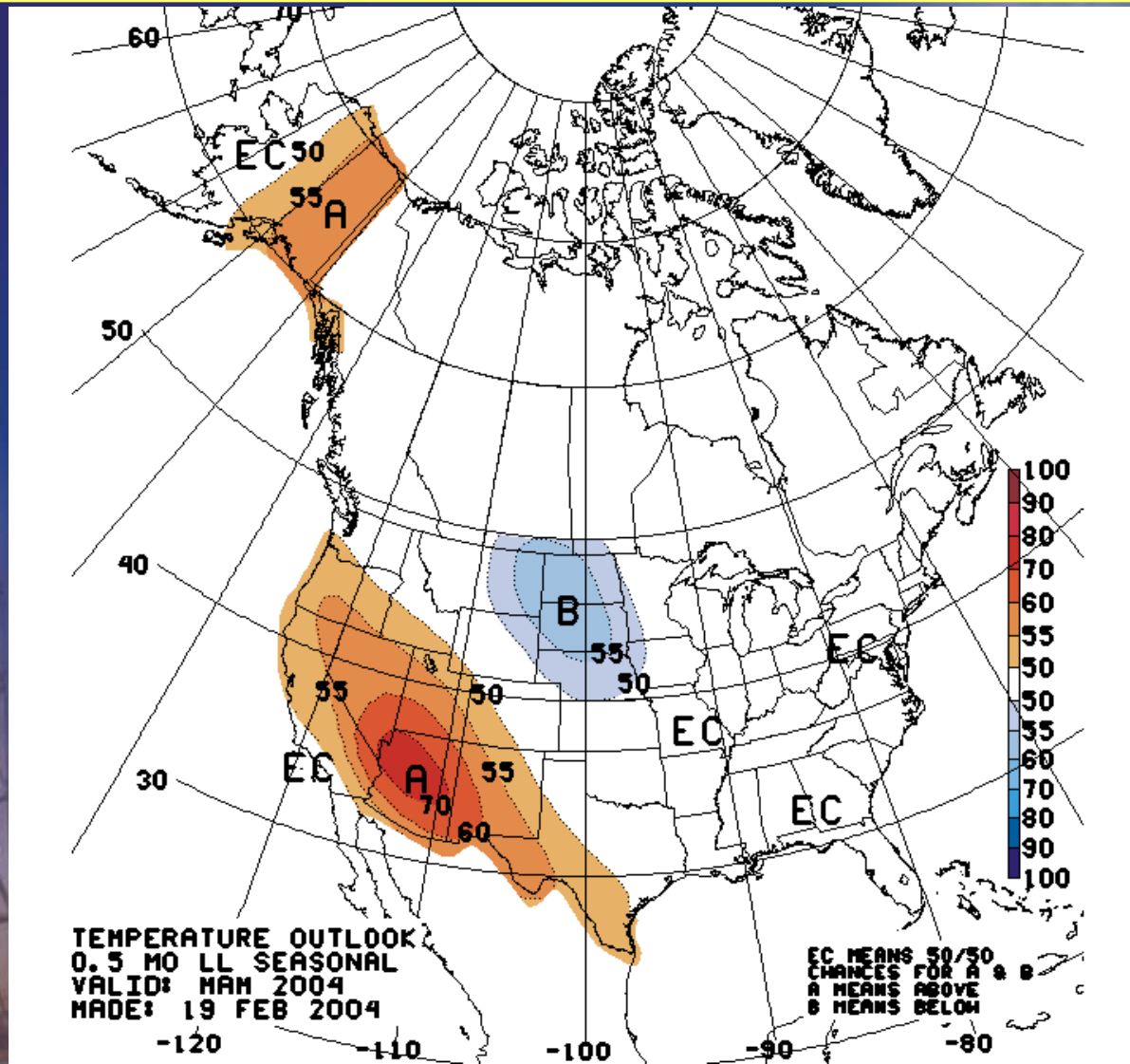
March – April - May





Long Range Temperature Forecast

March – April - May





Hydrologic Outlook

- Drought

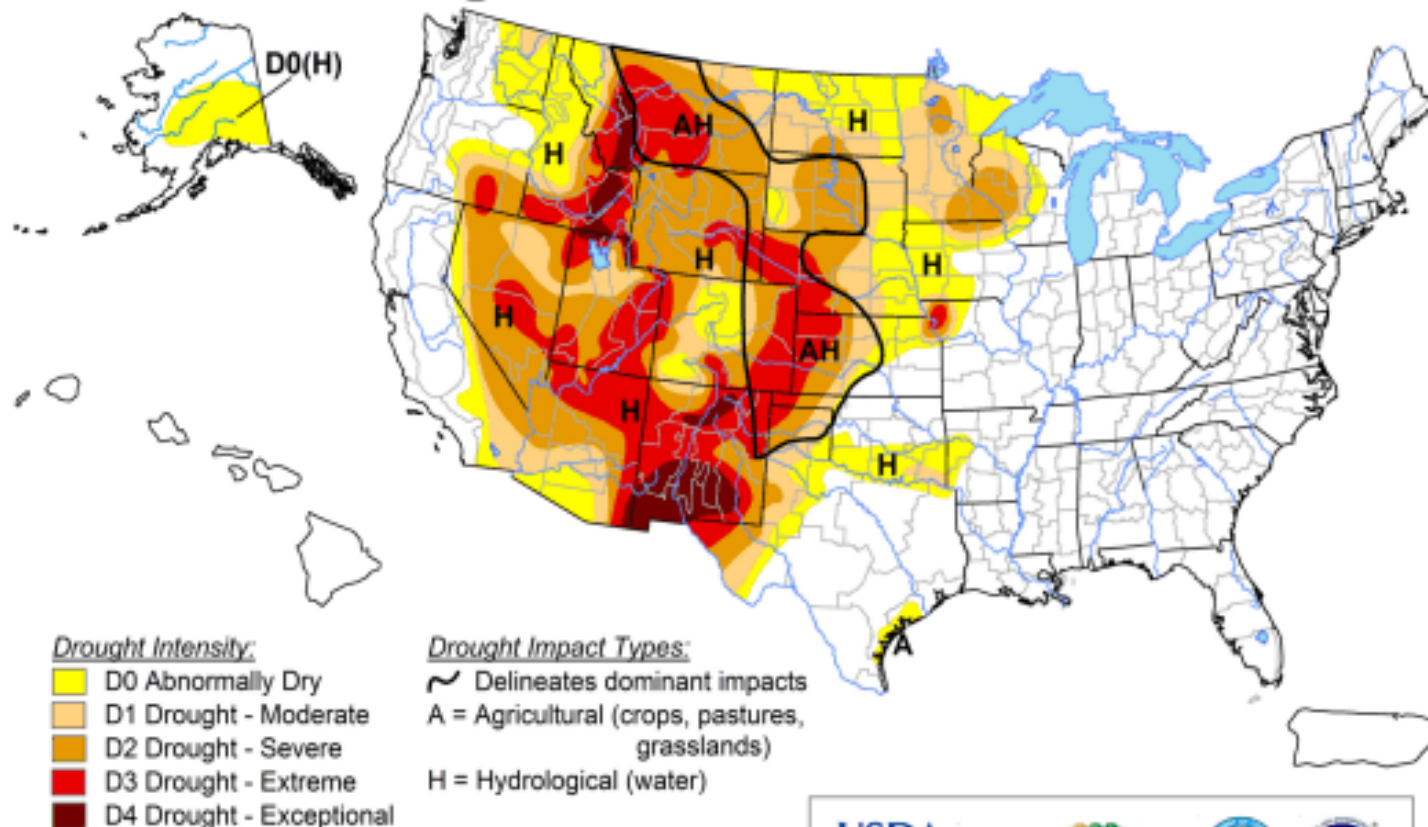


Hydrologic Outlook

U.S. Drought Monitor

March 2, 2004

Valid 7 a.m. EST



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



Released Thursday, March 4, 2004
Author: Richard Tinker, NOAA/NWS/NCEP/CPC



Contact Information

<http://www.wrh.noaa.gov/Saltlake/river/presentations>

Additional Information

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